

**MANAGEMENT OF RECEIVED DATA WITHIN HOST DEVICE
USING LINKED LISTS**

ABSTRACT OF THE DISCLOSURE

5 A received data processing and storage system includes an input that receives data
blocks corresponding to a plurality of input virtual channels. A routing module inspects the
received data blocks and determines an output virtual channel for the data blocks based upon
their respective input virtual channels. A receiver buffer instantiates input virtual channel
linked lists, output virtual channel linked lists, and a free list. A linked list control module
10 uses input virtual channel linked list registers, output virtual channel linked list registers, and
free linked list registers to manage the linked lists instantiated by the receiver buffer. An
output transmits data blocks corresponding to the plurality of output virtual channels. Data
blocks are stored in the receiver buffer in both input virtual channel link lists and output
virtual channel linked lists.